

REMARKS

Claims 1-33 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests withdrawal of the rejections and forwarding of the application onto issuance.

The §103 Rejections

Claims 1-4, 10-13, 30 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over a document entitled "*Understanding XML Schemas*" to Walsh (hereinafter "Walsh") in view of U.S. Patent No. 5,956,726 to Aoyama et al. (hereinafter "Aoyama").

Claims 5-9, 32 and 33 stand rejected under §103 as being unpatentable over Walsh and Aoyama, in further view of a document entitled "*How to implement Web-based Groupware Systems based on WebDAV*" to Dridi and Neumann (hereinafter referred to as "Dridi").

Claims 14-17, 23-27, and 29 stand rejected under §103(a) as being unpatentable over U.S. Patent No. 6,411,974 to Graham et al. (hereinafter "Graham") in view of Aoyama.

Claims 18-22 and 28 stand rejected under §103(a) as being unpatentable over Graham and Aoyama in view of Dridi.

The Office's Rejections and The References

The Office has failed to make out a *prima facie* case of obviousness and, for the reasons set forth below, Applicant respectfully traverses the Office's rejections. Before discussing, in detail, the substance of the Office's various rejections of the present claims, the following discussion is provided in an attempt to facilitate prosecution in this matter. The first section appearing below is

1 entitled "The §103 Standard", and provides a description of the pertinent §103
2 standard. The next few sections discuss aspects of the references cited by the
3 Office. The final section, is entitled "The Claims" and provides a discussion of
4 the substance of the Office's rejections.

5

6 **The §103 Standard**

7 To establish a *prima facie* case of obviousness, three basic criteria *must* be
8 met. First, there must be some suggestion or motivation, either in the references
9 themselves or in the knowledge generally available to one of ordinary skill in the
10 art, to modify the reference or to combine reference teachings. *In re Jones*, 958
11 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 5
12 USPQ2d 1596 (Fed. Cir. 1988). Second, there must be a reasonable expectation
13 of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.
14 1986). Finally, the prior art reference (or references when combined) must teach
15 or suggest *all* the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580
16 (CCPA 1974).

17 Hence, when patentability turns on the question of obviousness, the search
18 for and analysis of the prior art includes evidence relevant to the finding of
19 whether there is a teaching, motivation, or suggestion to select and combine the
20 references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin*
21 *Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)
22 ("the central question is whether there is reason to combine [the] references," a
23 question of fact drawing on the Graham factors).

24 "The factual inquiry whether to combine references must be thorough and
25 searching." *Id.* It must be based on objective evidence of record. This precedent
has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g.,

1 *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-
2 25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion,
3 teaching, or motivation to combine the prior art references is an 'essential
4 component of an obviousness holding'") (quoting *C.R. Bard, Inc., v. M3 Systems,*
5 *Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); *In re*
6 *Dembicczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our
7 case law makes clear that the best defense against the subtle but powerful
8 attraction of a hindsight-based obviousness analysis is rigorous application of the
9 requirement for a showing of the teaching or motivation to combine prior art
10 references."); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed.
11 Cir. 1998) (there must be some motivation, suggestion, or teaching of the
12 desirability of making the specific combination that was made by the applicant); *In*
13 *re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("teachings
14 of references can be combined only if there is some suggestion or incentive to do
15 so.") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*,
16 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

17 The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217
18 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings
19 must be made as to the reason the skilled artisan, with no knowledge of the
20 claimed invention, would have selected these components for combination in the
21 manner claimed") (emphasis added).

22

23 **The Walsh Reference**

24 Walsh describes, in a general way, various aspects of XML and, more
25 particularly, XML schemas. The discussion in Walsh is directed to explaining

1 what schemas are, what validity means, and how schemas are different from
2 Document Type Definitions or "DTDs".

3 In the section entitled "Schemas", Walsh describes the general notion of a
4 schema as being a model that describes the structure of information. Specifically,
5 a schema describes the possible arrangement of tags and text in a valid document.
6 Walsh instructs that schemas or models are described in terms of constraints and
7 that there are basically two kinds of constraints: content model constraints that
8 describe the order and sequence of elements, and datatype constraints that describe
9 valid units of data. Walsh then goes on to give examples of each.

10 Further on in the document, Walsh includes sections that discuss general
11 aspects of DTDs, various new features that are supported by schemas, and the
12 notion of validity.

13 Walsh is simply a general treatment of some aspects of XML.

14

15 **The Aoyama Reference**

16 Aoyama discloses a so-called document difference extraction method and
17 apparatus which is used for extracting the difference between structured
18 documents.

19 Aoyama's system, shown in Fig. 1, includes a CPU 101 that has an
20 executable document editing program 104 for editing documents, a structured
21 document parsing program 105 for converting each structured document into a
22 tree configuration, a structured document difference extraction program 106 for
23 extracting non-coincident portions of the structured documents as a difference, and
24 a comparison criterion table 107 for storing comparison criteria for extraction of
25 difference character strings.

Aoyama instructs that its so-called comparison criterion table 107 comprises tags satisfying four criteria. An *Identity tag* represents different tags allowing the respective contents thereof, i.e., the characters sandwiched between the start and end ones of the respective tags to be compared with each other only when the tag pairs are coincident with each other. An *Ignoring tag* represents a tag having contents of which the difference is ignored at the time of comparison. *Equivalence tags* represent a set of apparently different tags having the same logical meaning. *No-comparison tags* represent a set of tags which negate the comparison of the contents thereof with each other. See, e.g. column 7, lines 5-16.

In operation, Aoyama's difference extraction program 106 is called and when so called, the structured documents are analyzed by the structured document parsing program 105 by reference to the comparison criterion table 107 to thereby prepare document trees. The steps of a parsing program for the structured documents are shown in detail in Aoyama's Fig. 2B.

The document trees prepared by the above-mentioned steps are compared by node with each other and the difference is extracted by node. In the case where the tags to be compared are *no-comparison tags*, the particular nodes and underlying nodes (child nodes) are not compared.

The difference is extracted by character, only for the nodes found to be non-coincident. For a node of an *identity tag*, however, comparison by character is made only when the leading character (string) constituting a tag of the node is coincident. The *ignoring tags* that were not compared at Aoyama's step 204 are compared at the present step.

The difference extraction output of Aoyama's step 205 is displayed on the display unit of the terminal device 102 (step 206A). At the same time, the same

1 difference output can be supplied to a difference data utilization device in parallel
2 to the display unit.

3

4 **The Graham Reference**

5 Graham discloses a system and method that allows a user to convert log
6 files into a standard format which can be written to different "report devices."
7 See, e.g. column 3, lines 38-40.

8 Graham discusses a reporting process that is referred to as "Automated Test
9 Harness (ATH) Reporting". ATH Reporting parses the log files using a set of
10 parsing rules which are defined by the user in a file called an HRF file (Harness
11 Report File). This allows the user to be able to parse the different log files without
12 having to write a parser for every log file. Instead the user simply defines the
13 rules for parsing a file. See, e.g. column 3, lines 40-50.

14 Graham instructs that ATH Reporting uses special rules to define how to
15 convert the text within log files into records which can be written to many
16 different reporting platforms or devices. A process called the Report Server is
17 responsible for deciphering the rules and parsing the log files in order to obtain the
18 records. The Report Server also controls one or more report devices which
19 process the records obtained from the log files and places the information in their
20 respective formats.

21 Graham instructs that a report device can be designed to produce the exact
22 type of report needed. For example, one report device might calculate and report
23 the average number of errors per program, while another report device might build
24 a table of all error messages produced by the program. Yet both of these report
25 devices would operate on the same set of records.

1 The Dridi Reference

2 Dridi simply describes aspects of the World Wide Web Distributed
3 Authoring and Versioning (WebDAV) protocol. Specifically, Dridi describes
4 various WebDAV methods and how they support collaborative work (primarily
5 asynchronous collaborative authoring) on the Web.

6 The Claims

7 Claim 1 recites a method of parsing an Extensible Markup Language
8 (XML) data stream. The recited method comprises:

- 9
- 10 • defining a plurality of states, individual states being associated with
11 individual elements of an XML data stream;
12 • associating one or more rules with each state;
13 • receiving an XML data stream;
14 • evaluating the XML data stream against one or more of the rules for
15 individual elements contained in the XML data stream; and
16 • disregarding associated portions of the XML data stream if any of
17 the rules that are associated with those portions are violated.

18 In making out the rejection of this claim, the Office argues that Walsh
19 discloses that schemas are defined in terms of constraints and, additionally, a
20 content model constraint that describes the order and sequence of elements. The
21 Office then states that it would have been obvious to utilize the proposed methods
22 of constraints as taught by Walsh for evaluating incoming XML data stream
23 against a given schema and associating the constraints with at least one schema
24 requirement or rule to provide a well-formed schema structure. See, Office Action
25 page 2, paragraph #4. In making out this rejection, the Office discusses the
constraints, as presented in Walsh, and argues that "it is these constraints that
perform similar techniques as states being associated with individual elements."

Based on this, the Office then argues that it would have been obvious to have

utilized the constraint techniques as disclosed in Walsh for evaluating the XML data stream against at least one rule for an element. As a motivation for taking this position, the Office argues that such would have provided a proficient parsing process.

Applicant disagrees with the Office's interpretation and application of Walsh. The constraints to which Walsh refers, are not methods or techniques, as the Office contends they are. The constraints are simply ways of describing the order and sequence of elements (referred to as "content model constraints"), and ways of describing valid units of data (referred to as datatype constraints). That is, the constraints to which Walsh refers define the schema itself.

The Office notes, in the furtherance of its rejection, that Walsh does not disclose a technique for disregarding associated portions of the XML data stream if any rules are violated. The Office then relies on Aoyama and argues that it discloses a method for structured document difference string extraction. The Office then appears to argue that Aoyama's "ignoring tag" criterion, discussed in column 7, lines 10-12, discloses a similar method for ignoring data within documents within an extraction process. Based on this, the Office argues that the combination of Walsh and Aoyama would render the subject matter of claim 1 obvious "to provide a proficient framework for streamlining and parsing XML data streams."

Applicant respectfully notes that the Office's interpretation of Aoyama's "ignoring tag" is inconsistent with the subject matter to which the Office applies it (i.e. the recited act of "disregarding"). Specifically, claim 1 recites "disregarding associated portions of the XML data stream if any of the rules that are associated with those portions are violated." According to Aoyama, the "ignoring tag" provides one criterion the satisfaction of which results in ignoring the contents of

1 the tag. Put another way, one of Aoyama's "rules" is that if there is an "ignoring
2 tag", then the contents of that tag are ignored during the comparison processing.
3 That is, if this "rule" is satisfied, then the data is ignored. The recited act of
4 "disregarding", on the other hand, states that associated portions of the XML data
5 stream are disregarded if any of the rules that are associated with those portions
6 are *violated*. Thus, it appears that there is a bit of an inconsistency with the
7 Office's interpretation and application of Aoyama.

8 Additionally, Applicant disagrees that the teachings of Walsh and Aoyama
9 would render the subject matter of claim 1 obvious and therefore traverses the
10 Office's rejection. For example, the "ignoring tag" disclosed in Aoyama simply
11 provides a criterion that represents a tag that has contents of which the difference
12 is ignored at the time two document trees that represent individual documents are
13 compared. That is, according to Aoyama, two documents that are to be compared
14 have individual document trees built—one for each document. Once the
15 document trees are built, a node-by-node comparison is made between the trees
16 for purposes of extracting the differences between the documents node-by-node.
17 If, during the comparison of these document trees, "ignoring tags" are
18 encountered, then the content of this tag is ignored.

19 It is unclear to Applicant how a reference that teaches a process that
20 extracts a difference character string that describes differences between two
21 documents, can be combined with Walsh (which provides a general treatment of
22 XML schemas) to render to the subject matter of claim 1 obvious. Applicant
23 respectfully submits that it appears as if the Office has searched the prior art for
24 bits and pieces of references that disclose what the Office considers bits and pieces
25 of the claimed subject matter, and then has taken the position that combining these
references would render the claimed subject matter obvious.

1 Further, in making out this rejection, the Office has stated, as a motivation
2 to combine these references, "providing a proficient framework for streamlining
3 and parsing XML data streams". This stated motivation is so sweepingly broad
4 and lacking in specificity so as to support any purported combination of references
5 that could seemingly disclose anything that might be argued to be similar to the
6 claimed subject matter.

7 The Office has failed to establish a *prima facie* case of obviousness for a
8 number of reasons that include: misinterpreting the references and failing to
9 establish particular findings as to why the skilled artisan, with no knowledge of the
10 claimed embodiment, would have selected these components for combination in
11 the manner claimed. See, e.g. *In re Kotzab*, 217 F.3d 1365, 1371.

12 Accordingly, for any and/or all of the individual reasons mentioned above,
13 claim 1 is allowable.

14 Claims 2-13 depend either directly or indirectly from claim 1 and are
15 allowable as depending from an allowable base claim. These claims are also
16 allowable for their own recited features which, in combination with those recited
17 in claim 1, are neither disclosed nor suggested by the references of record either
18 singly or in combination with one another. In addition, as these claims are
19 allowable, Dridi is not seen to add anything of significance to the rejection of
20 claims 5-9.

21 Further, it is important to note that the Office has made, in its various
22 rejections of the dependent claims, various conclusory statements as to why one
23 would be motivated to combine these references. For example, in making out the
24 rejection of claim 2, the Office states that "the constraints disclosed by Walsh
25 would have provided a proficient technique for associating at least one rule related
to a schema of the XML data stream as similar techniques are demonstrated

utilizing constraint methods." Applicant simply does not understand this rationale and respectfully submits that this motivation does not comply with the §103 standard as noted above. As an additional example, the rejection of claim 4 states, as a motivation to combine Walsh and Aoyama, that "it would have been obvious to ... have associated the constraints with at least one request type defining a specific element, because it would have provided a well-structured tracking process." Applicant respectfully requests that the Office describe with particularity, why and how the skilled artisan, with no knowledge of the embodiment claimed in claim 4, would have selected these components for combination.

Claim 14 recites a method of parsing an Extensible Markup Language (XML) data stream. The recited method comprises:

- defining a schema module that is associated with an HTTP request type that is received from a client, the schema module having a function that determines whether an XML data stream conforms to a given schema that is associated with the HTTP request type;
- evaluating an XML data stream with the schema module; and
- disregarding a portion of the XML data stream if it does not conform to the given schema.

In making out this rejection, the Office argues that Graham discloses an opening module for opening textual streams and an extraction module for extracting the desired contents from the textual streams, and apparently equates this with the recited act of "defining" that appears above. Graham does not, as the Office contends, disclose or in any way suggest defining a schema module that is associated with an HTTP request type that is received from a client. The Office argues that utilizing opening and extraction modules would have provided similar results as a schema module and, based on this, it would be obvious to include

1 these models for extracting data streams and evaluating the stream against a given
2 schema. Applicant respectfully disagrees. Nowhere does Graham describe, hint
3 or suggest defining a schema module that is associated with an HTTP request type
4 that is received from a client. The fact that Graham discloses opening and
5 extraction modules cannot make up for the fact that the first recited act of
6 "defining" is completely missing from Graham. Accordingly, for at least this
7 reason, this claim is allowable.

8 The Office then relies on Aoyama and argues that it discloses tags which
9 have the content ignored at the time of comparison and, as such, this meets the
10 subject matter recited in the act of "disregarding" listed above. The Office argues
11 that it would be obvious to combine the subject matter of Graham with the subject
12 matter of Aoyama for to do so would provide a well-structured framework for
13 proficiently parsing data streams. Applicant respectfully disagrees.

14 Aoyama in no way discloses a method in which a portion of an XML data
15 stream is disregarded if it does not conform to a given schema. Further, ignoring
16 the Office's misinterpretation of Aoyama for a moment, the stated motivation for
17 combining Graham and Aoyama is so sweepingly broad and lacking in specificity
18 so as to support any purported combination of references. The Office has failed to
19 establish a *prima facie* case of obviousness for a number of reasons that include:
20 misinterpreting the references and failing to establish particular findings as to why
21 the skilled artisan, with no knowledge of the claimed embodiment, would have
22 selected these components for combination in the manner claimed. See, e.g. *In re*
23 *Kotzab*, 217 F.3d 1365, 1371.

24 Accordingly, for any and/or all of the individual reasons mentioned above,
25 claim 14 is allowable.

1 **Claims 15-23** depend either directly or indirectly from claim 14 and are
2 allowable as depending from an allowable base claim. These claims are also
3 allowable for their own recited features which, in combination with those recited
4 in claim 14, are neither disclosed nor suggested by the references of record either
5 singly or in combination with one another. In addition, as these claims are
6 allowable, Dridi is not seen to add anything of significance to the rejection of
7 claims 18-22 respectively.

8 **Claim 24** recites an Extensible Markup Language (XML) parsing system
9 comprising:

- 10
- 11 • a parser configured to receive an XML data stream and generate a series of calls as it parses the XML data stream;
 - 12 • a node factory communicatively associated with the parser and configured to receive the parser's calls and responsive thereto construct a representation of the XML data stream that the parser is parsing; and
 - 13 • a schema module communicatively associated with the node factory and configured to evaluate the node factory's representation of the XML data stream and determine whether it conforms to a known schema.
- 14

15 In making out this rejection of this claim, the Office argues that this claim
16 contains the system limitations for carrying out the methods of claim 14-17 and is
17 rejected under the same rationale. Applicant respectfully submits that this claim is
18 not simply *just* the system for carrying out the methods of claims 14-17. Whether
19 or not the system recited in this claim can be used to carry out the method of
20 claims 14-17 is irrelevant with respect to the Office's duty to examine this claim
21 and specifically apply the references to each and every element appearing in the
22 claim.
23
24
25

1 The Office has failed to make out a *prima facie* case of obviousness.
2 Notwithstanding this fact, Applicant has reviewed the references cited by the
3 Office and submits that the subject matter of this claim is neither disclosed nor
4 suggested by the references, either singly or in combination with one another.
5 Accordingly, for at least this reason, this claim is allowable.

6 Claims 25-29 depend either directly or indirectly from claim 24 and are
7 allowable as depending from an allowable base claim. These claims are also
8 allowable for their own recited features which, in combination with those recited
9 in claim 24, are neither disclosed nor suggested by the references of record either
10 singly or in combination with one another. In addition, as these claims are
11 allowable, Dridi is not seen to add anything of significance to the rejection of
12 claim 28.

13 Claim 30 recites an Extensible Markup Language (XML) parsing system.
14 The recited system comprises:

- 15
- 16 • a collection of schema modules, each of which being configured to
17 evaluate a different schema that is associated with an XML data
18 stream; and
 - 19 • a plurality of states associated with each schema module, individual
20 states of a schema module defining a schema requirement relating to
21 a particular element that is evaluated by that schema module.

22 In making out this rejection, the Office argues that this claim is the system
23 for carrying out the method of claim 1. Applicant respectfully submits that this
24 claim is not simply *just* the system for carrying out the methods of claims 1.
25 Whether or not the system recited in this claim can be used to carry out the method
of claim 1 is irrelevant with respect to the Office's duty to examine this claim and
specifically apply the references to each and every element appearing in the claim.

1 The Office has failed to make out a *prima facie* case of obviousness.
2 Notwithstanding this fact, Applicant has reviewed the references cited by the
3 Office and submits that the subject matter of this claim is neither disclosed nor
4 suggested by the references, either singly or in combination with one another.
5 Accordingly, for at least this reason, this claim is allowable.

6 Claims 31-33 depend either directly or indirectly from claim 30 and are
7 allowable as depending from an allowable base claim. These claims are also
8 allowable for their own recited features which, in combination with those recited
9 in claim 30, are neither disclosed nor suggested by the references of record either
10 singly or in combination with one another. In addition, as these claims are
11 allowable, Dridi is not seen to add anything of significance to the rejection of
12 claims 32 and 33.

13

14 **Conclusion**

15 All of the claims are in condition for allowance. Accordingly, Applicant
16 requests that a Notice of Allowability be issued forthwith. If the Office's next
17 anticipated action is to be anything other than issuance of a Notice of Allowability,
18 Applicant requests that the undersigned be contacted for the purpose of scheduling
19 an interview.

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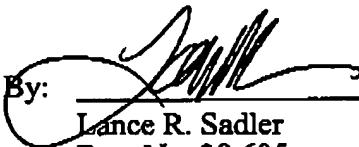
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22 Respectfully submitted,

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24 Dated: 6/16/03

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